
# Action research for innovation management: three benefits, three challenges, and three spaces



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R&D MANAGEMENT

# Action research for innovation management: three benefits, three challenges, and three spaces

Susanne Ollila[1] and Anna Yström[1,2]

[1]Department of Technology Management and Economics, Chalmers University of Technology, 412 96, Gothenburg, Sweden. susanne.ollila@chalmers.se; anna.ystrom@liu.se
[2]Department of Management and Engineering, Linköping University, 581 83, Linköping, Sweden

**Given that the innovation landscape is changing, and new forms of organization and management are emerging, this study discusses the potential benefits of action research for innovation management (IM) as it provides closeness to living emergent systems, generates rich insights as well as knowledge for both rigorous theory development and change in practice. Drawing from a large-scale action research study involving a complex collaborative organizational construct, we outline three challenges from employing action research: the process is both reflexive and progressive, the researcher is both an outsider and an insider, and the outcome is both general and specific. A model of three social spaces (the action research space, the academic space, and the practitioner space) is proposed to address the challenges and assist in navigating the multitude of processes, roles, and outcomes associated with action research. The study argues that action research for IM is well suited to exploring tacit aspects of practices and processes in the emergent or shifting study contexts to transform practices through interventions. Thus, if implemented carefully by experienced researchers, it can provide valuable data that are indispensable for theory development in the field of IM.**

## 1. Introduction

Managing innovation has become increasingly complex. New collaborative organizational constructs are needed to support multiple actors who interact to create new products, knowledge, business models, and applications, which emerge unpredictably over considerable periods (e.g., Dougherty and Dunne, 2011). In this paper we argue that action research is a suitable research approach for enabling a continued exploration of current issues in innovation management (IM), such as new organizing forms (West, 2003; Brunswicker et al., 2018), changing managerial and governance structures (Jeppesen and Lakhani, 2010; Afuah and Tucci, 2012; Colombo et al., 2013), collaborative innovation work, and implications for individual roles (Elmquist et al., 2009; Alexy et al., 2013; Ollila and Yström, 2017). The link between academic and practical relevance is essential in IM (Ritala et al., 2018) and action research has the potential to generate knowledge that is both useful and rigorous (Hodgkinson and Rousseau, 2009). Huxham and Vangen (2003) argue that 'action research is particularly appropriate for developing theory that relates closely to practice and is concerned with the process of managing' (p. 399). It is a valuable research approach in seeking the practical improvement of IM.

Action research is integral to advancing the theory and practice of organizational development

(Eden and Huxham, 1996; French and Bell, 1999; Gummesson, 2000; Docherty et al., 2014), focusing on operations management (Coughlan and Coghlan, 2009) and inter-organizational collaboration (Yström et al., 2019). The approach is recognized in studies concerning democracy, sustainability, and the renewal of society, for example acknowledging that democracy is the legacy of action research and claiming that action research has the potential to contribute to addressing current problems concerning democracy and sustainability (Gunnarsson et al., 2015; Hansen et al., 2016). However, few studies in the IM literature employ action research (Ottosson, 2003). A search was performed on January 23, 2019, on the Web of Science website (http://apps.webofknowledge.com/) with a specified search string [TS = ('action research' OR 'intervention research' OR 'collaborative management research') AND TS = ('innovation management')] in English. The search covered the document type of an article over the timespan of all years and included the following indexes: SCI-EXPANDED, SSCI, and ESCI. Few results were generated (e.g., Ottosson, 2003; Ebner et al., 2009; Midler and Beaume, 2010; Kocher et al., 2011; Arnold, 2017). Thus, there is a potential for additional research to complement the existing perspectives.

Action research is a scientific approach that merits practical knowing (Susman and Evered, 1978; Eden and Huxham, 1996; Coghlan, 2011). It is conducted with practitioners (rather than on or for them); thus, it has the potential to generate knowledge of both academic and practical relevance (Coghlan, 2011). Action research is, fundamentally, a cyclical inquiry process, involving diagnosing a problem, planning action steps (interventions), and implementing and evaluating outcomes (Eden and Huxham, 1996). It is an emergent inquiry process with dialogue at the core (Ottosson, 2003), where data shift as a consequence of intervention, thereby making it difficult to predict and control (Coghlan, 2011). Through researcher presence and intervention, action research enables access to more subtle, spontaneous, and tacit theories (Argyris and Schön, 1991; Eden and Huxham, 1996).

Action research enables inquiry from the inside, e.g., by immersing oneself into the context and practices being studied, as opposed to from the outside by, e.g., using questionnaires or studying annual reports (Evered and Louis, 1981). We argue that, from the inside, it is possible to uncover not only explicit knowledge of managing and organizing innovation in collaborative contexts but also tacit knowledge that is embedded in the skills, practices, ideas, and experiences of people (Leonard and Sensiper, 1998). Furthermore, inquirying from the inside can contribute to our understanding by attending to the dynamic and emergent nature of new collaborative organizational constructs, characterized as broad and loosely coupled (Ritala et al., 2018). Additionally, in response to the call for relevant research beyond the IM academic realm, research must be conducted in a way that ensures that findings are related to the real world of practicing managers and the actual issues that concern organizational members (ibid).

The paper primarily explores *the contribution of action research to IM research* through three interconnected research questions: What are the benefits of action research for IM researchers? What challenges do IM researchers face when conducting action research? How can researchers deal with such challenges to realize the potential of action research?

We draw from action research and experience to contribute to why action research is relevant and provide a way to address identified challenges. We conclude that action research is useful when attempting to capture tacit aspects embedded in practices and processes. Moreover, there is a need to adapt to shifting requirements in research design. It includes multiple levels of analysis or sources of data due to emergent research content and a desire to generate theory and implement changes based on reliable information, thereby cross-feeding theoretical and practical knowledge and insights. The paper proposes implications and guidance for IM researchers interested in employing action research.

## 2. Action research

### *2.1. What is action research and why is it relevant*

Kurt Lewin (Foster, 1972; Elden and Chisholm, 1993), a founder of action research, believed that good theories are practical and wanted to formulate a method to help practitioners (Lewin, 1946). In action research, Lewin combined the methodology of experimentation, solid theory, and a true ambition for actions on social concerns (Huxham and Vangen, 2003). Action research includes several cycles of diagnosing, action planning, action taking, evaluation, and learning (Lewin, 1946; Susman and Evered, 1978).

Today, many different conceptualizations of action research exist. Thus, it is sometimes depicted as an umbrella term for action-oriented research (Park, 1999), including *action science* (Argyris et al., 1985; Argyris and Schön, 1991), *participatory research* (Hall, 1981; Brown and Tandon, 1983), *action learning* (Morgan and Ramirez, 1984; Coghlan and Coughlan, 2015), and *appreciative inquiry* (Cooperrider and Srivastva, 1987). Action research is referred to as a method or

 

technique for doing research; others consider it to be a methodology, a rationale for the research approach, or even a philosophy of life expressed in collaborative inquiry to issues that matter (Reason and Bradbury, 2008). Coghlan (2011) presents action research as a world view, building on the philosophy of practical knowing, where the action researcher can use various methods and techniques for collecting and analyzing data. Practical knowing, according to Coghlan (2011), directs us to the concerns of human living and action; it is particular, contextual, and practical. Thus, he argues that 'in order to understand actions in the everyday, we need to inquiry into the constructions of meaning that individuals and groups make about themselves, their situations, and the world, especially for the task at hand' (Coghlan, 2011, p. 60).

Action researchers empirically study important organizational or social problems together with people who experience them: 'Action research aims to contribute both to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework' (Rapoport, 1970, p. 499). Thus, action research is not created particularly for research (Coghlan, 2011). However, when conducted properly, it will enable the collection of more subtle and significant data, thus creating the basis for both rigorous and relevant research (Eden and Huxham, 1996).

## 2.2. *The potential benefits of action research*

Inside its own community, action research is appreciated as having the potential to deliver robust and practical knowledge for a wide community of management and organization scholars (Coghlan, 2011). To address the first research question, we considered the action research literature and identified three benefits of action research, regarding its potential of (1) providing closeness to living emergent systems, (2) generating rich insights, and (3) generating knowledge for both rigorous theory development and change in practice. We do not suggest that these benefits are all-inclusive and of foremost significance, as other (qualitative) research approaches share parts of the same benefits. Moreover, section 2.4 compares essential aspects of action research, case-study research, and ethnography.

### *2.2.1. Providing closeness to living emergent systems*

Adopting a mode of inquiry from the inside is at the core of action-oriented research approaches (Evered and Louis, 1981). It is the best way to appreciate the reality of an organizational setting (ibid), as it provides the necessary closeness to people and practices. The immersion into the events and activities of the organizational setting imply not only participation but also actively changing them through interventions, influencing people, and practices (Bradbury-Huang, 2010). Action research provides the opportunity to study living *emergent* systems due to the flexibility and adaptability of the research design. This flexibility includes the continuing spiral of action research cycles that emerge from the interventions, reflection, and learning after each cycle (Lewin, 1997), within the overall research design agreed upon with the practitioners at the start. Moreover, the specific focus and techniques for data collection emerge when adapting to the 'life and emergence' of the organizational setting. Accordingly, an action researcher does not employ a deductive framework to guide the inquiry; it allows important features to emerge through the experience in and of the situation (Evered and Louis, 1981). Hence, how action research is *designed* (i.e., with the practitioner in the organizational setting) and *conducted* (i.e., within the organizational setting) provides the opportunity to draw close to the living systems (social processes and worlds) regarding various aspects of IM.

### *2.2.2. Generating rich insights*

Action research means involving practitioners and engaging with them in an organizational setting over a genuinely concerning matter. This involvement, including making interventions by suggesting changes in practices, provides a richness of insight that is absent in other research approaches (Reason and Rowan, 1981; Whyte, 1991). From this perspective, facts (e.g., events, activities, and utterances in specific situations) have no meaning in isolation from the setting (Evered and Louis, 1981). Meaning is developed from the participant perspective in the organizational setting. If researchers can come close to those perspectives, they can obtain a rich and deep understanding of the phenomena studied (Ottosson, 2003). As proposed by Huxham and Vangen (2003, p. 385), 'in particular, intervention settings can provide rich data about what people do and say – and what theories are used and usable – when faced with a genuine need to take action'. The interventions have the potential to generate *new and unexpected insights* that can lead to important theoretical development (Whetten, 1989; Huxham and Vangen, 2003). The design of the interventions is informed not only by existing theories but also theories emerging from the action research, as the intervention can be used to test emerging theoretical ideas (Eden

 

and Huxham, 1996; Huxham and Vangen, 2003). Hence, action research, with researcher *involvement* and *intervention* in the organizational setting, generates rich insights about processes, practices, and people in IM.

#### *2.2.3. Generating knowledge for both rigorous theory development and change in practice*

Action research constitutes an epistemology that produces knowledge contingent on a particular situation, which develops the capacity of members of organizations to solve their problems (Susman and Evered, 1978). This hallmark tradition originates from the scientific premise that this is the way to obtain better data and effect change (Coghlan, 2011). Actionable knowledge (Argyris, 2003) is the co-habitation of traditional scientific and practical knowledge; it is useful to practitioners and theoretically robust for scholars (Adler and Shani, 2005). The quality of the interventions and interaction with practitioners is paramount to the quality of the knowledge generated, regardless of whether one changes the practice or generates a new theory (Eden and Huxham, 1996). Action research concerns the development and elaboration of theory from practice in an incremental way, progressing deductively in small steps (ibid). Hence, the practice in organizational setting (the *everyday practices* and the *changed practice due to the researcher interventions*) is an integral part of the *generation of rigorous theory*.

### *2.3. The researcher's role in realizing the potential of action research*

Good action research is good science, although it does not necessarily meet all the tenets of the traditional scientific method (Susman and Evered, 1978; Eden and Huxham, 1996). Rigor in action research concerns how data are generated, gathered, interpreted, and evaluated through multiple action research cycles; theory must inform the design and development of the actions in the cycles (Coghlan and Brannick, 2010). Naturally, the research process rigor is, to a large extent, dependent on the researcher's competence, skills, and understanding of the approach requirements.

By proposing twelve contentions, Eden and Huxham (1996) address the requirement for good-quality research with an action research design. They note that researcher efforts are best concentrated on exploring aspects that cannot be captured easily through other approaches (contention 10). Thus, living up to all the contentions in practice is challenging and requires time and experience as action research is imprecise, uncertain, and unstable (Eden and Huxham, 1996). Like an actor rather than a spectator, an action researcher is involved in events on the research site (ibid). Action research cycles include interventions in the organizational system where the research is conducted, which demands a knowledgeable and experienced researcher in methods for consultancy and intervention (ibid). The action researcher must have organization and management consultancy skills, which comprise the action research toolbox, alongside research method skills (e.g., collecting data and analyzing data). Knitting together the role of the consultant and researcher demands a high degree of self-awareness (ibid). The personal style of the researcher as an interventionist will have an impact on research and practice. Thus, it is advisable to choose an intervention form that can be comfortably conducted (Huxham and Vangen, 2003).

Additionally, action research must have implications beyond action or generation of knowledge in the specific local situation. The researcher must conceptualize or categorize the particular experience to render it meaningful to others, from which an action research theory emerges (Eden and Huxham, 1996). Thus, to ensure quality data from action research, high-standard methods and orderliness are required to capture the emerging research content of each episode of interventions in the study phenomenon included in the action research cycles (ibid).

Moreover, action research demands the building and sustaining of a researcher–organization relationship (Israel et al., 1992). Despite the advantages of action research, it has dilemmas and challenges. Israel et al. (1992) emphasize that 'action research is a complex long-term process that requires continued commitment from all involved over the long haul' (p. 97). Thus, they suggest that researchers and practitioners must recognize and respect that the value placed on research and action may differ. They must share control of the process and content. Moreover, they must recognize the costs and rewards. Furthermore, the action research design inevitably faces political problems in the organization, given that change is at the core of this approach. However, practitioner involvement increases the chance of overcoming such issues.

### *2.4. Comparing action research with case-study research and ethnography*

Qualitative research methods are often employed for their flexibility and emergent characteristics (Van Maanen, 1998). They make room for the unanticipated; moreover, they result in knowledge about

 

Table 1. A comparison of the benefits of action research in action research, case-study research, and ethnography

| Benefits of action research | Providing closeness to living emergent systems | Generating rich insights | Generating knowledge for both rigorous theory development and change in practice |
|---|---|---|---|
| *Concrete examples* | | | |
| Action research | The researcher is an insider as an actor | Interventions trigger new and additional practices in areas related to research and practitioner interest | Active collaboration with practitioners |
| | *In situ* | Scope for trying out a theory with practitioners in real situations and gaining feedback from this experience | Research and practice are integrated across time and space |
| | Research design and processes adaptable to researcher and practitioner needs | | |
| Case-study research | The researcher is an insider or outsider as a spectator | Studying dynamics in settings related to specific research interest | Access to the case setting |
| | *In situ* or retrospective | Scope for adapting research methods to emerging research needs | Research and practical implications are separated across time and space |
| | Research design and processes adaptable to researcher needs | | |
| Ethnography | The researcher is an insider as a spectator | Studying directly observable aspects of human activity taking place in real-life settings related to general research interest | Access to the field |
| | *In situ* | Scope for the researcher to adapt to what is going on in the field | Research and practical implications are separated across time and space |
| | Research design and process adaptable to the field | Generate detailed descriptions | |

the specific social worlds under study (ibid). As described by Van Maanen et al. (2007, p. 1145): 'the aim of organizational and management research is to speculate, discover, and document, as well as to provisionally order, explain, and predict (presumably) observable social process and structures that characterize behavior in and of organizations'. Arguably, all social research involves participation in the setting under study since the social world cannot be studied without being part of it (Hammersley and Atkinson, 1983). Action research, case study, and ethnography are qualitative research approaches, enabling studies of social processes and social worlds. All three approaches adopt a mode of 'inquiry from the inside'. Hence, the researcher plays an insider role (Evered and Louis, 1981). Moreover, the approaches share the potential to provide closeness to living emergent systems and generate rich insights. However, the engagement in and with the social setting varies between the three approaches (see Table 1).

Eisenhardt (1989) describes the case study as a research strategy that focuses on understanding the dynamics present within a single setting; thus, the key features are boundedness and specificity. The case study is defined by 'interest in the individual case, not the methods of inquiry used' (Stake, 2005, p. 443). Eisenhardt (1989) proposes that case studies can be used to provide descriptions, test theory, or generate theory. Theoretical sampling (Glaser and Strauss, 1967) is often used as the case is chosen because it allows for studying theoretically derived factors. The process of conducting a case study, according to Eisenhardt (1989), adopts a positivistic view of research, as the process is directed toward generating testable hypotheses and theory.

The case-study approach has the potential to provide closeness to living emergent systems and generate rich insights similar to action research. However, the researcher, given the positivistic view, remains a spectator from the inside even when engaging with informants to collect data through interviews, questionnaires, or observation. When adapting the data collection methods and levels of analysis to events *in situ*, the researcher sticks to the theoretical frame to ensure the development of testable hypotheses and theory. In case studies, interviewing and observing people *in situ* can generate rich insights, while interventions initiated by the researcher generates additional rich insights in action research. The potential to create rigorous theory and change practices 'simultaneously' since both types of knowledge are equally valued and important is a significant difference between the action research and the case-study approach. The practical implications and relevance of the case-study approach are separated from the data collection and analysis, as indicated by the

 

theoretical sampling and focus on generating testable hypotheses. The purpose of case-study approach is to study the case, not to change the case.

Willis et al. (2007) suggest that case studies are similar to ethnography; however, there are substantial differences. The ethnographic approach 'uncover[s] and explicate[s] how […] people in particular work settings come to understand, account for, take action, and otherwise manage their day-to-day situation' (Van Maanen, 1979, p. 540). Organizational researchers trained in an ethnographic tradition believe that 'less theory leads to better facts, and more facts lead to better theory' (Van Maanen, 1979, p. 539), which is different from case studies as described above. Separating the facts from the theory, the extraordinary from the common, and the general from the specific is best accomplished as a fieldworker by being close to people and events, documenting observations in highly detailed field notes, and accounting for the observed patterns of human activity (ibid). This fieldwork is separated from deskwork when the researcher revisits the field notes. Van Maanen states that it is 'the ethnographer's direct personal contact with others that is honored by readers' (Van Maanen, 1995, p. 428). Thus, rather than the material and information provided by the participants, the presence of the researcher is the predominant focus.

The ethnographic approach has the potential to provide closeness to living emergent systems and generate rich insights, as does action research. Thus, researchers immerse themselves in field studies and remain spectators to capture the emerging, observable patterns of human activity. It enables the researcher-ethnographer to draw close to a living emergent system and gain rich insights to provide detailed descriptions of observations. The researcher-ethnographer adapts to events *in situ* without following any theoretical framework regarding later stages of theory generation. The facts must be as innocent of theory as possible; no theorizing of the data is incorporated into the fieldwork, as is the case in action research. The third benefit of action research is also a major difference between the action research approach and the ethnographic approach. The practical relevance of ethnography lies mainly in the detailed description created by the researcher once the fieldwork is done. Hence, the practical relevance is separated from the research but this does not imply that practical relevance is not important. Arguably, ethnography encourages researchers to be close to the first-order conceptions of informants regarding events when creating the researcher's second-order concepts (i.e., the 'theories' used to organize and explain facts in the first-order concepts). Similar to the case-study approach, the purpose of the ethnographic approach is to study the field, not to change the field.

To conclude, even though there are similarities between action research, case studies, and ethnography, there are differences in their origin and purpose. Action research is not primarily aimed at understanding social arrangements; it effects desired change as a path to generating knowledge (Bradbury-Huang, 2010). Action research links research to practice; research informs practice and practice informs research, synergistically. In action research, the researcher tests a theory with practitioners in real situations, gains feedback from this experience, modifies the theory, and attempts again. Each iteration of the action research process contributes to the theory. A summary of the comparison of action research, case studies, and ethnography regarding the benefits of action research is presented in Table 1.

## 3. An action research study as an illustration

This paper draws on our experience of conducting an extensive (four-year) action research study of SAFER, a research center in northern Europe that focuses on traffic and vehicle safety. SAFER is a collaborative organizational initiative at the forefront of innovation (i.e., the creation of knowledge and relationships). It is a complex collaborative organizational construct, characterized by uncertainty and ambiguity as SAFER does not have a full mandate over resources located among member organizations (see Table 2 for details on SAFER).

The study of SAFER was based on problems experienced in practice – specifically, the challenges experienced by the director in managing a complex organizational setting, in which the majority of the people were employed elsewhere. As researchers were interested in studying open innovation in practice, the study was an opportunity to contribute to an emerging field of research by investigating a collaborative innovation setting in the making. Governmental research funding enabled the longitudinal study of SAFER. Over time, a range of action research cycles was conducted. The cycles, each building on knowledge from the previous ones, focused on different organizational and managerial aspects that supported the creation of an organizational setting and encouraged and enabled the knowledge sharing and creation pivotal for collaborative innovation (Table 3).

During the time with SAFER, the practitioners continuously validated the study interpretations and conclusions. Recurring interviews and chats with

 

Table 2. About SAFER

| | |
|---|---|
| Description | A research center, where 38 partners (2019) from the Swedish automotive industry, academia, and authorities cooperate to create a center of excellence within traffic safety research and safe mobility |
| Inaugurated | 2006 |
| Focus | Five areas: Systems for accident prevention and automated driving; road user behavior; human body protection; and care, rescue, and safety performance evaluation |
| Output | Over 300 vehicle and traffic safety projects completed since the start of SAFER in 2006 |
| Funding | Public funding (national and European) as a center of excellence for specific research projects. SAFER is heavily reliant on public funding for maintaining the infrastructure of collaboration and member contributions for projects |
| People | SAFER has 40 full-time workers, while 300 persons use the facilities temporarily. All are employed elsewhere. The management team has a director and co-director |
| Facilities | Meeting place with a 1,300 $m^2$ working area, including 70 workplaces, 15 small meeting rooms, conference facilities, and project areas. Located at Lindholmen Science Park |

people in and around SAFER were crucial to understanding the state of the collaboration and creating useful interventions regarding essential questions that were related to organizing and managing for collaborative innovation at specific moments in time. After the action research study was completed, we maintained contact with several key individuals and continued to transform the extensive material gathered into theoretical contributions. Several studies have been published based on the empirical material gathered, which also provides detailed descriptions of the research setting (Yström, 2013; Ollila and Yström, 2015, 2016; Yström et al., 2019).

## 3.1. Our action research experience: Three challenges

This section offers insights into the second research question by outlining some challenges faced by the action researchers. It describes how we addressed them by continuously engaging in trade-offs regarding our thinking and acting.

### 3.1.1. The challenge of both a reflexive and progressive process

To follow the living, emergent system of SAFER, we employed a research process which, in addition to our overall study design and focus, implied that we were agile in responding to events in SAFER and focused on creating opportunities for joint learning. Thus, the actions, outcomes, and development paths were not planned. Instead, these emerged as we followed the matters of genuine concern in the collaborative setting; we gained insights through our continuous presence in the SAFER environment, as well as the weekly dialogue with the director. This understanding enabled us to concretize the action research cycles.

However, being close to a living emergent system generated challenges regarding the research process; we needed to reflect on emerging paths and simultaneously intervene to influence progression and emergence. On the one hand, we needed to make time for reflection and encourage a reflective stance among the practitioners involved to generate useful (both practical and academic) knowledge and *joint learning*. We stimulated reflection regarding our data through dialogues with the director and facilitating discussions with participants in workshops. The comments and reflections gave us additional data and understanding.

On the other hand, the practitioners often harbored a desire for action and swift implementation of suggestions, thereby pushing for *progression and change*. They demanded quick conclusions to improve actions or act as advisors when we needed more time for data *analysis and theorizing*. While the research process was ongoing, we handled this mainly by utilizing our experience from previous research and knowledge of organizational behavior and consultancy work to conduct informed interventions by providing useful perspectives and careful recommendations. It also implied that we could test tentative conclusions based on our ongoing theorizing.

### 3.1.2. The challenge of being both an outsider and an insider

From the onset, we knew we needed to immerse ourselves in the field and get involved. We spent hours interacting with the practitioners. We experienced the benefit of being present, given the ready availability of data. There seemed to be endless reports of challenges regarding innovation, collaboration, and management from the practitioners, as well as activities in which they asked us to participate. Thus, being in the field as a *facilitator, including making interventions* in workshops, allowed us to generate rich insights to capture reasoning, behaviors, and emotions, as well as the difference between what people said they were doing

 

Table 3. Overview of action research cycles in the SAFER study

| Action research cycle | When | Action (intervention) | Fact-finding – data collection | Reflection and learning |
|---|---|---|---|---|
| Governance at SAFER – challenges with managing without formal authority and control over resources | 2009 | Seminar on governance with the board and management, including the director | Interviews with the steering and reference group members at SAFER | Unclear to the participants what SAFER is and who is responsible for process and outcomes |
| Participating in an open innovation arena | 2008–2010 | Two workshops on identity – what is SAFER, who am I, and who are others in the SAFER context. All participants at SAFER invited | Participative observations of project groups in a project at SAFER. 27 semi-structured interviews with participants at SAFER | Being present and participating in the program is key for what SAFER is and becomes – what type of knowledge and innovations are pursued by the partners |
| Partner organizations' views on participating in an Open Innovation arena | 2010–2012 | Seminar on partnership and membership with the board and management, including the director | 22 semi-structured interviews with representatives from partner organizations at SAFER | All partners are not welcome to join all SAFER projects nor have access to the results from all projects to continue development into innovations. This situation must be managed |
| Insights into the details of one open innovation project at SAFER | 2011 | Conversations with the project manager | Nine semi-structured interviews with a project team member, project manager, and the project steering committee | There are several contradictory storylines about the open innovation project, creating challenges for the project. Disputes about what constitutes a 'good' project outcome in terms of concrete innovations. Working with future scenarios both enables and hinders collaboration |
| The practices of an open innovation arena manager | 2009–2013 | Conversations with the director. The director reflected upon her situation and practices for new ideas on how to further develop her role and practices by integrating elements such as a new language and models | 25 scheduled and audio-recorded conversations with the director of SAFER, bi-monthly | These recurring sessions (1–2 hours) with the director became a critical part of the study. Organizing and managing an open innovation arena without formal authority requires that other practices compensate for it, such as sense giving; political engagements; and facilitating a learning, knowledge sharing, and creative environment |

(espoused theory) and what they did (theory in use) (Argyris and Schön, 1974).

However, getting involved was challenging. Regarding how to view our role, it became apparent that we needed to balance between considering ourselves as outsiders (objective and distanced) and insiders (subjective and close). On the one hand, the action research process required that we took an active role and even acted as *advisors*. We have even been referred to as SAFER members. Being present, accessible, and engaging earned us trust and acceptance as insiders.

On the other hand, becoming an insider also meant that we were not expected to be outsiders and distance ourselves from happenings and the responsibility to drive change. It was easy to get involved with too much too quickly without reflecting on how it concerns the focus of the research, given the risk of tampering with the degree of method and orderliness essential for theory generation. When we felt pressured to take on responsibility beyond that of an advisor, we reminded ourselves and others of our outsider role as *scholars* by using academic language to distance ourselves and make time away from the field.

#### *3.1.3. The challenge of generating both general and specific outcome*

To generate outcomes that were usable in everyday life and had an explicit concern with theory, we focused on designing, executing, and communicating the research. We experienced the benefits of acknowledging the practical relevance of our research, as the practitioners were engaged and eager to participate in specific research activities despite the time consumed. By using our *understanding* of the specificities of SAFER and their challenges, we designed interventions that were well grounded and sparked practitioner insights.

Nevertheless, delivering on the expectations of contributing to new or changed *practices* was challenging, as we also had to ensure the generation of academically relevant *theory*. To achieve this outcome with a satisfactory quality and relevance level, we often felt we did not live up to expectations, as we constantly engaged in trade-offs. On the one hand, when we presented theoretical models from our action research to practitioners at SAFER, they did not always see the practical relevance. Once we clarified that the model was based on the practical knowledge they had shared with us, they were more inclined to appreciate the theoretical outcome.

On the other hand, principles set by the academic community guided the generation of academically relevant knowledge and theory. Findings from engaging in action required synthesis and translation. In our case, this was a step-by-step process of knitting different pieces together to understand not only the context-specific but also the big picture of the study to contribute to a scientific discussion. This situation implied that we had to make time for academic conferences and writing journal articles.

## 4. Discussion

The three challenges action researchers must deal with can be summarized as follows:

- Process: The challenge of both a reflective and progressive research process.
- Role: The challenge of being both an outsider and an insider.
- Outcome: The challenge of generating both general and specific outcomes.

These highly practical challenges facing an action researcher should not be considered as 'flaws' or 'deficiencies' that require correction. Instead, they must be acknowledged, appreciated, and dealt with to allow for capturing the specific potential of action research. When reflecting on how we address challenges, we noted an adaptation in speech and action regarding the different groups of people with whom we engaged. To address our third research question, we draw on Henri Lefebvre's (1991) notion of social space. He presents spaces as social products created through social interaction, each with its mental, physical, ideological, and cultural realm. We distinguish and conceptualize three social spaces we employed during our action research study, *the academic space, the practitioner space,* and *the action research space.* We shifted seamlessly between the three spaces to engage in trade-offs in the spectrum of challenges regarding the process, role, and outcomes; we found this process to be helpful for realizing the potential of the action research approach.

### *4.1. The three social spaces to realize the potential of action research*

The *action research space* is often thought of as the 'only' space in action research. This space is created in the interaction between researchers and practitioners as they jointly conduct the core activities of the action research cycles: planning action, taking action, and fact finding. It requires the researcher perspective, legitimacy, and competence, as well as those of the practitioners, in the choice of interventions to evaluate its effects and ascertain what was

 

learned and the basis for designing the next action. Hence, the process in the action research space is characterized by joint learning.

The *academic space* is created through researchers' interaction with scholars and includes research practices and processes, such as data theorizing, discussions with peers, and publishing. For the outcome of an action research project to gain credibility in the academic community, the researchers must act and speak as scholars. Thus, the action researcher distances herself from the local and concrete and still communicates an insider's story. By failing to engage in deductive thinking, the research might be considered as merely consultancy work rather than high-quality research (Eden and Huxham, 1996).

The *practitioner space* is created through researchers' interaction with practitioners outside the core action research team with interest in (or affected by) the research outcome. In this space, the researchers are exposed to implications, questions, and fears connected to the change that results from the action research project.

The three spaces are archetypical and have distinct characteristics. In practice, however, they are interconnected. Thus, the boundaries between them can be somewhat blurred. Each space is created through interaction with others and permits certain actions and voices while prohibiting others. Spaces can (but do not need to) be separated in time and space (Lefebvre, 1991). The three spaces distinguish between various aspects of the process, researcher role, and outcome of action research. Thus, it follows Ottosson's (2003, p. 93) argument that action research involves many 'both…and' situations, which require the researcher's attention to make the necessary trade-offs.

We argue that the three interconnected social spaces are ways of separating and integrating the thinking and action of the action researcher (outlined in Figure 1) and explicating how researchers addressed challenges. Our thinking and acting became *separating* and *integrating mechanisms* applied to ensure that we could realize the benefits of action research. Separating and integrating mechanisms can be understood as strings that can be simultaneously stretched and relaxed to different degrees contingent to situational requirements. Examples of such mechanisms are *language, location, dialogue, translation, researcher knowledge,* and *experience*; they can be used as separating or integrating mechanisms to implicitly or explicitly demarcate the space in which the researcher is acting to set the expectations of the researcher and practitioners. The researcher's primary focus in thinking and acting shifts between the spaces. Moreover, it concerns process, role, and outcome as indicated by the X's in Figure 1, showing which type of mechanism is dominating.

Thus, using mechanisms in an integrative way is particularly emphasized in the action research space, as the researcher engages the practitioners in shared thinking and acting. In doing this the researcher takes a facilitator role to support joint learning and enable a deeper understanding of all

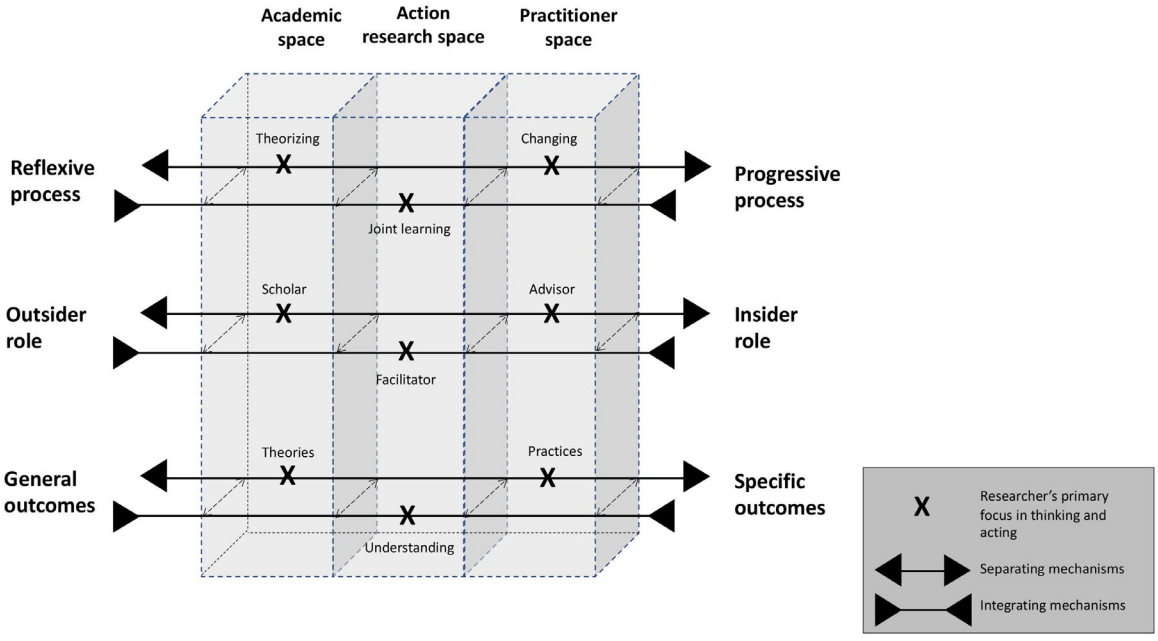


Figure 1. A model of three interconnected social spaces in action research. [Colour figure can be viewed at wileyonlinelibrary.com]

 

aspects encompassed by the action research project. Using the mechanisms in a separating way is emphasized in the academic space and the practitioner space respectively to delineate differences and ensure both academic and practical relevance. In the academic space, the researcher takes the role as a scholar theorizing the data gained through the joint learning and the deep understanding to generate theory, thereby enforcing a separation from the practitioners. In the practitioner space, the researcher takes the role of an advisor using the joint learning and deep understanding to contribute and support the change process leading to improved practices, thereby enforcing a separation from the academic community.

## 4.2. *Implications for the researcher using an action research approach*

Navigating the multitude of processes, roles, and outcomes can be confusing and frustrating. Our conceptualization of the three spaces and the identified integrating and separating mechanisms contribute to the IM community by providing a vocabulary that can create clarity, find progressive paths, and set the right expectations. Thus, it adds additional layers to understand the research approach, which facilitates the use and adaptation of action research in the field of IM (adding to, e.g., Ottosson, 2003). However, understanding the proposed conceptualization is not necessarily sufficient to become a skilled action researcher, as there are also practical implications requiring the IM researcher to develop skills and competences to succeed.

### *4.2.1. Develop collaborative skills (over time)*

When engaging in an action research process, the researcher is responsible for the overall design of the research and facilitating the process of joint learning, including securing organizational context and individual member commitment to make necessary interventions (Israel et al., 1992). It requires the researcher to work with others through face-to-face dialogue and joint action. Such collaborative skills typically take time and experience to develop, as argued by Eden and Huxham (1996). It requires commitment and patience when learning about and understanding the research approach. It is learned by acting it rather than reading.

### *4.2.2. Adapt to the changing pace and requirements of the research process*

The researcher must have the skills to adjust data collection methods to the changing pace and focus on what goes on to ensure quality data, which constitutes the basis for theorizing in the academic space and developing practices in the practice space. Thus, it becomes essential to keep orderly documentation of the emergent research process to facilitate analysis. It, furthermore, accentuates the need for the researcher to be present and attentive in the organizational context to learn and adapt to emerging areas of concern swiftly. As most IM scholars might be more accustomed to a separation of fieldwork and deskwork, a more integrated work process, which is emergent rather than planned, should be implemented.

### *4.2.3. Maintain a holistic perspective of the research process*

A clear risk in action research, addressed by Eden and Huxham (1996), is that the researcher acts too much like a consultant. The researcher must be comfortable in assuming a role similar to that of an advisor rather than the owner of the change (i.e., having the responsibility for implementing new practices which reside among the practitioners). While developing and implementing new practices (manifested as routines, tools, and methods) is central in the practitioner space, the researcher must maintain a holistic perspective of the project goal to ensure that the knowledge generated in the action research space provides an appropriate foundation for both academically and practically relevant outcomes. For IM scholars, this entails broadening the scope of what outcome is expected from a research project and ensuring the inclusion of additional stakeholders in the creation of that outcome.

In summary, action research requires continuous reflection on one's role as a researcher and how this impacts the research process. Using the outlined practical implications can serve as a checklist for the aspiring action researcher: *Am I interested in developing my collaborative skills and engaging with practitioners? Would I be comfortable with adapting to a changing and emergent research process? Would I maintain a holistic perspective of the research process?* If the answer to any of these is no, then, perhaps, it is worth reconsidering the choice of the research approach. It is also the case that even if the answer is yes to all questions, the researcher does not entirely decide on research design, as it requires the active willingness and commitment from an organization to take part. Moreover, since IM researchers and journals stem from a positivistic tradition (Goffin et al., 2019), the action research approach lies outside of the norm. Thus, a researcher must find strategies for executing and publishing in a field dominated by another paradigm.

 

### 4.3. The potential of action research for IM

In times when the field of IM must reach new insights and create new knowledge concerning emerging phenomena of genuine concern for innovation practitioners, more of the same existing research is not sufficient. New research approaches that can bring complementary insights to the field should be pursued and, as argued by Garud et al. (2013, p. 803), '… if we want to understand the complexities that practitioners in the field experience, then researchers will need to cultivate a sensitivity to the systems of meanings that endogenously drive innovation processes in particular settings…'. In our efforts to uncover *what action research can contribute to IM*, action research enables sought-after insights that are related to organizing and managing emerging innovation processes, thereby building on the interweaving of practical knowing and theoretical knowledge. Thus, it is a relevant approach to explore further because research based on close collaboration with practitioners usually generates different kinds of information, examines different variables, and yields more diverse knowledge than that limited to the involvement of scholars alone (Hodgkinson and Rousseau, 2009). Nonetheless, Goffin et al. (2019) posit that IM is a discipline rooted in a positivistic tradition, influencing the norms of scholars and journals in the field, which suggests that research approaches that do not adhere to the same tradition are less likely to be accepted and adopted, posing a challenge for action research and other qualitative approaches in the same vein. However, such approaches could be highly relevant for the IM discipline 'with its constant flow of new concepts, making exploration, and theory building necessary' (Goffin et al., 2019, p. 611). While contributing to the same aspiration of generating new theory in the field of IM, the reviewed qualitative approaches differ somewhat in underlying philosophies regarding the research goal and how it is executed, with a fundamental difference concerning the intention to improve practice through the direct involvement of the researcher (e.g., through interventions).

Action research is considered as particularly relevant for studying organizational and managerial processes in innovation, as it provides closeness to living emergent systems (social processes and worlds) and the necessary flexibility to follow the unpredictable and unplannable aspects of innovation (Schroeder et al., 1986). Thus, it allows for studying innovation practices and processes in the making (Hoholm and Araujo, 2011; Jungmann et al., 2015; La Rocca et al., 2017). The high level of researcher involvement and interventions provide rich data about what people do and say regarding innovation (Huxham and Vangen, 2003), based on which grounded and relevant theory can be generated. The iterative nature and short feedback time between testing and evaluating outcomes through interventions allow for swift and continuous theory development and revision, which is essential when studying irreversible and unpredictable phenomena or processes, such as innovation (Ottosson, 2003). It is also through interventions and building on the value of practical knowing (Coghlan, 2011) that action research can contribute directly to changing IM practices and processes in specific settings.

Furthermore, by inquiring into the everyday actions and involved individuals' constructions of meaning (Coghlan, 2011), action research can bring new and relevant insights about broad and loosely coupled forms of organizing (Ritala et al., 2018) that primarily concern the social worlds and tacit aspects about their organization and orchestration. Making sense of interactions among a multitude of actors to grasp what happens at different levels is typically challenging. Here, action research is useful, as it can provide access to diverse information, which can be difficult to obtain without considering other approaches. Thus, action research can provide new and unexpected insights, thereby leading to important theoretical development (Whetten, 1989; Hodgkinson and Rousseau, 2009) and direct implementations of new practices regarding IM in new organizational constructs.

Admittedly, action research is not a panacea suitable for researching all aspects of IM. Nevertheless, it has the potential for studying practices and processes regarding innovation organization and management (Hodgkinson and Rousseau, 2009).

However, no research approach is without limitations. Noteworthy drawbacks of the approach are that it requires access to an organization willing to engage in practitioner–researcher collaboration (Israel et al., 1992), it is time consuming, and it potentially generates overwhelming research data. Furthermore, practical limitations exist when studying managerial processes taking place in multiple locations simultaneously; however, this does not necessarily preclude action research on digital platforms as long as the researcher is immersed in platform actions.

We argue that when the goal is to study tacit aspects of practices and processes and the context is emergent or shifting, the potential of action research shines, as it enables the understanding of everyday actions by inquiring into individual's constructions of meaning (Coghlan, 2011) in formal and informal organizational processes and settings. Arguably, it is neither worthwhile nor appropriate to mobilize

 

action research when the research does not explore aspects of organizational life or pursue change and improvement of practices by designing and making interventions as the benefits of the approach would appear only as impediments.

## 5. Conclusions, limitations, and further research

This paper combines theoretically and practically grounded insights regarding the use of action research in IM. Furthermore, it contributes to an ongoing discussion concerning methods in IM research and examines when and why IM scholars should consider action research. This paper highlights the ability of action research to uncover and understand tacit aspects of processes, practices, and shifting or emergent study contexts (such as complex organizational forms now common in the new IM landscape) to promote changes in practice through interventions.

We suggest that in a highly applied discipline such as IM, where the creation and application of knowledge go hand in hand, action research complements other approaches as a rigorous methodology that combines theory generation with practical impact. While it requires time and commitment, we argue that action research can provide valuable data indispensable for theory development in the field of IM if implemented carefully by experienced researchers that are knowledgeable in analyzing rich qualitative data and methods for making interventions in social systems.

This paper is based on a small sample, which may limit the generalizability of the outcomes. Generalizing from small samples or context-dependent studies is not necessarily a problem (Gioia et al., 2013); it is contingent on the choice of the 'case' and its ability to exemplify a general principle, as well as the handiwork of the researcher in crafting a grounded theory. While the challenges outlined based on our experience can also be traced in previous action research studies (e.g., Israel et al., 1992; Huxham and Vangen, 2003; Ottosson, 2003), additional studies are needed to validate them in wider innovation contexts. Furthermore, future studies could utilize the conceptualization of the three spaces as a departing point for discussions with both researchers and practitioners concerning research design and expectations on the research process. Such studies could be initiated to elaborate on the identification and application of integrating and separating mechanisms.

Current trends in IM point to a continued interest in networked, platform-based, or open forms of organizing innovation work (Bogers et al., 2019); thus, future research should encompass multiple levels of analysis in studying new organizing forms, future managerial and governance structures, and the implications for individuals working in such contexts (Elmquist et al., 2009; Bogers et al., 2017). We encourage future studies to adopt action research to bring unique possibilities in accessing and uncovering social processes and worlds. Moreover, researchers could experiment and develop new processes and practices needed in IM, regarding virtual platforms (Chesbrough and Teece, 1998), how innovation processes emerge in collaborative contexts (Garud et al., 2013), or how individual identity and role is changing in new organizational forms (Alexy et al., 2013; Ollila and Yström, 2017).

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**Susanne Ollila** is Professor in Organizational Behavior at the Department of Technology Management and Economics at Chalmers University of Technology, Sweden. She is the founder of the Managing In-between research group, focusing on understanding innovation created in the spaces in-between established organizations. Her research is focused mainly on organizational behavior, management of innovation and knowledge sharing. Her recent research has been published in journals such as R&D Management, Journal of Applied Behavioral Science, Creativity and Innovation Management, Leadership and Organization Development Journal, and Journal of Knowledge Management.

**Anna Yström**, is Senior Lecturer (docent) in Industrial Organization at the Department of Management and Engineering at Linköping University. She previously worked as Senior Researcher at Chalmers University

 

of Technology, Sweden, as a part of the Managing In-between research group. Her research focuses on management of different forms of inter-organizational collaboration and new ways of organizing innovative work. Her previous work has been published in, e.g., R&D Management, Journal of Applied Behavioral Science, Creativity and Innovation Management and International Journal of Innovation Management.

 